

ATTORNEY DOCKET NO: 71532

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : KANAI et al.  
For : ULTRASONIC DIAGNOSTIC...  
Dated : September 9, 2004

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Attached please find Form PTO-1449 together with the references as stated in the specification.

- U.S. Patent 4,867,167 as discussed on Page 5 of the specification. No copy of this U.S. Patent is being submitted at this time in accordance with the U.S. Patent Office rule.

- U.S. Patent 4,803,994 as discussed on Page 5 of the specification. No copy of this U.S. Patent is being submitted at this time in accordance with the U.S. Patent Office rule.

- U.S. Patent 4,688,428 as discussed on Page 5 of the specification. No copy of this U.S. Patent is being submitted at this time in accordance with the U.S. Patent Office rule.

- U.S. Patent 4,470,303 as discussed on Page 5 of the specification. No copy of this U.S. Patent is being submitted at this time in accordance with the U.S. Patent Office rule.

- U.S. Patent 5,840,028 as discussed on Page 6 of the specification. No copy of this U.S. Patent is being submitted at this time in accordance with the U.S. Patent Office rule.

- Japanese Patent Gazette (Patent Laid-Open No. 10-5226) as discussed on Page 6 of the specification.

- Japanese Patent Gazette (Patent Laid-Open No. 2000-229078) as discussed on Page 6 of the specification.

- Kanai, H., Hasegawa, H., Chubachi, N., Koiwa, Y. and Tanaka, M., "Noninvasive evaluation of local myocardial thickness in heart wall and its color coding", IEEE transaction UFFC, 1997; 44:752-768 as discussed on Page 6 of the specification.

- Hasegawa., H, Kanai., H, Hoshimiya., N, Chubachi, N., Koiwa, Y., "Accuracy evaluation in the measurement of a small change in the thickness of arterial walls and the measurement of elasticity of the human carotid artery", Jpn. J. Appl. Phys. 1998; 37:3101-3105 as discussed on Page 6 of the specification.

- Kanai, H., Koiwa, Y., Zhang J., "Real-time measurements of local myocardium motion and arterial wall thickening", IEEE transaction UFFC, 1999; 46:1229-1241 as discussed on Page 6 of the specification.

The following references have been cited in the International Phase of the above-identified application.

- Shin'ichi KATSUMATA et al., "Shinzoheki karano Cho'onpa Koho Sanran Kyodo no Isshin Shukinai deno Tanshuki Hendo no Keisoku", The Institute of Electronics, Information and Communication Engineers Gijutsu Kenkyu Hokoku, 19 September, 2001, Vol. 101, No. 317, pages 1 to 6 has been cited under Category X as being relevant to International claims 1 - 7 and further cited under Category Y as being relevant to International claims 8 and 9. No translation is available at this time.

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- JP 1-98982 discloses a backscatter data collection technique for ultrasound. The reference has been cited under Category X as being relevant to International claim 1, cited under Category Y as being relevant to International claims 2 - 6 and further cited under Category A as being relevant to International claims 7 - 9. No translation of this reference is available at this time. Applicant further wishes to bring to the attention of the Examiner the corresponding U.S. Patent 4,803,994. This U.S. Patent has previously been mentioned above.

- JP 10-5226 discloses ultrasonic diagnostic equipment. The reference has been cited under Category Y as being relevant to International claims 2 - 6 and further cited under Category A as being relevant to International claims 7 - 9. This reference has been previously cited above. No full translation is available at this time, however, attached is an English language abstract. Applicant further wishes to bring to the attention of the Examiner the corresponding U.S. Patent 5,840,028. This U.S. Patent has previously been mentioned above.

- JP 2000-152929 discloses ultrasonic diagnostic equipment. The reference has been cited under Category Y as being relevant to International claims 8 and 9 and further cited under Category A as being relevant to International claims 1 - 7. No full translation is available at this time, however, attached is an English language abstract.

- JP 5-337111 discloses ultrasonic diagnostic apparatus. The reference has been cited under Category A as being relevant to International claims 1 - 9. No full translation is available at this time, however, attached is an English language abstract.

- JP 2-215448 discloses ultrasound diagnostic equipment for calculating and displaying integrated backscatter or scattering coefficients by using scattering power or scattering power

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spectrum of blood. The reference has been cited under Category A as being relevant to International claims 1 - 9. No translation of this reference is available at this time. Applicant further wishes to bring to the attention of the Examiner the corresponding U.S. Patent 5,097,836 and the corresponding European Patent EP 0 383 288.

Consideration of the above references is requested.

Respectfully submitted  
for Applicant,

By:



John James McGlew

Registration No. 31,903

McGLEW AND TUTTLE, P.C.

JJM:tf  
71532.4

Enclosed: PTO-1449 Form  
copy of International Search Report  
copies of (11) References

DATED: September 9, 2004  
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SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-0410.

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS EXPRESS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, NO.: EV436439656US

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BY: *Louisa Forte* DATE: September 9, 2004

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Form PTO-1449

U.S. Department of Commerce Sheet 1 of 2  
Patent and Trademark OfficeLIST OF REFERENCES CITED  
BY APPLICANT  
(Use several sheets if necessary)Atty Docket No.: 71532  
PCT No.: PCT/JP02/08975  
Applicant: KANAI et al.

## U.S. PATENT DOCUMENTS

Ex- aminer Initial	Document No.	Date	Name	Class	Sub- class	Filing Date
	<u>4,867,167</u>	<u>Sept. 19, 1989</u>	<u>Magnin</u>			<u>June 30, 1988</u>
	<u>4,688,428</u>	<u>Aug. 25, 1987</u>	<u>Nicolas</u>			<u>March 25, 1986</u>
	<u>4,470,303</u>	<u>Sept. 11, 1984</u>	<u>O'Donnell</u>			<u>Sept. 20, 1982</u>
	<u>5,840,028</u>	<u>Nov. 24, 1998</u>	<u>Chubachi et al.</u>			<u>Jan. 21, 1997</u>
	<u>4,803,994</u>	<u>Feb. 14, 1989</u>	<u>Burke</u>			<u>Aug. 12, 1987</u>
	<u>5,097,836</u>	<u>March 24, 1992</u>	<u>Yamada et al.</u>			<u>Feb. 15, 1990</u>

## FOREIGN PATENT DOCUMENTS

Ex- aminer Initial	Document No.	Date	Country	Class	Sub- class	Translation Yes/No
	<u>JP 10-5226</u>	<u>Jan. 13, 1998</u>	<u>Japan</u>			<u>No</u>
	<u>JP 2000-229078</u>	<u>Aug. 22, 2000</u>	<u>Japan</u>			<u>No</u>
	<u>JP 1-98982</u>	<u>April 17, 1989</u>	<u>Japan</u>			<u>No</u>
	<u>JP 2000-152929</u>	<u>June 6, 2000</u>	<u>Japan</u>			<u>No</u>
	<u>JP 5-337111</u>	<u>Dec. 21, 1993</u>	<u>Japan</u>			<u>No</u>
	<u>JP 2-215448</u>	<u>Aug. 28, 1990</u>	<u>Japan</u>			<u>No</u>

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	<u>EP 0 383 288</u>	<u>Aug. 22, 1990</u>	<u>Europe</u>			<u>Yes</u>

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

Ex- aminer Initial	Author	Date	Title	Textbook in	Translation Yes/No
	<u>Hiroshi Kanai et al.</u>	<u>July 1997</u>	<u>Noninvasive Evaluation of Local Myocardial Thickening and Its Color-Coded Imaging</u>	<u>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 44, No. 4, July 1997</u>	<u>Yes</u>
	<u>Hideyuki Hasegawa et al.</u>	<u>1998</u>	<u>Accuracy Evaluation in the Measurement of a Small Change in the Thickness of Arterial Walls and the Measurement of Elasticity of the Human Carotid Artery</u>	<u>Jpn. J. Appl. Phys. Vol 37 (1998) pp. 3101-3105</u>	<u>Yes</u>
	<u>Hiroshi Kanai et al.</u>	<u>September 1999</u>	<u>Real-Time Measurements of Local Myocardium Motion and Arterial Wall Thickening</u>	<u>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 46, No. 5, September 1999</u>	<u>Yes</u>
	<u>Shin-ichi Katsumata et al.</u>		<u>Measurement of Rapid Variation in Ultrasound Integrated Backscatter from Heart Wall during a Cardiac Cycle</u>	<u>The Institute of Electronics, Information and Communication Engineers</u>	<u>No</u>

Examiner

Date Considered